

**Amendments to the Claims:**

Please cancel claims 1-29.

Please amend claims 30 and 32-36.

Please add new claims 37-49.

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

Claims 1-29 (Canceled).

30 (currently amended). A system for accurately placing guiding placement of a bone engaging element in a bone comprising:

a guide configured to guide placement movement of the bone engaging element at toward a location on a bone, said guide having a bore through which said bone engaging element may be advanced, and said bore defining a first longitudinal axis; and

a guide support apparatus ~~supporting~~ configured to support said guide, said ~~guide~~ support apparatus including;

a support body mountable to the bone;

~~a guide~~ an arm extending from said support body ~~and configured to extend toward the location on the bone~~; and

a position adjustment assembly supported on said guide arm, and  
~~configured to permit gross and fine adjustments of the position of said~~  
~~guide relative to the bone in at least one degree of freedom~~ said position  
adjustment assembly including (i) a first gross adjustment mechanism  
configured to permit gross adjustment of said guide in relation to said  
support body along a second longitudinal axis, (ii) a first fine adjustment  
mechanism configured to permit fine adjustment of said guide in relation to  
said support body along said second longitudinal axis, (iii) a second gross  
adjustment mechanism configured to permit gross adjustment of said  
guide in relation to said support body along a third longitudinal axis, (iv) a  
second fine adjustment mechanism configured to permit fine adjustment of  
said guide in relation to said support body along said third longitudinal  
axis, and (v) a third adjustment mechanism configured to permit  
adjustment of said guide in relation to said support body along said first  
longitudinal axis,

wherein said first longitudinal axis is not coincident with said  
second longitudinal axis,

wherein said first longitudinal axis is not coincident with said third  
longitudinal axis, and

wherein said second longitudinal axis is not coincident with said  
third longitudinal axis.

31 (original). The system of claim 30, wherein said guide is a pin guide and the bone engaging element is a pin configured to be placed in bone.

32 (currently amended). The system of claim 30, wherein said position adjustment assembly includes:

a gross first positioning block movably mounted on said guide arm to make gross position adjustments in one degree of freedom; and

a fine adjustment second positioning block movably supported on said gross first positioning block and operable to make fine position adjustments in said one degree of freedom,

wherein said guide is supported by said fine adjustment block.

33 (currently amended). The system of claim 32, wherein: ~~said position adjustment assembly includes fine adjustment mechanism disposed between said gross positioning block and said fine adjustment block~~

one of said first positioning block and said second positioning block includes a dovetailed recess, and

the other of said first positioning block and said second positioning block includes a dovetailed member positioned within said dovetailed recess.

34 (currently amended). The system of claim ~~33~~ 30, wherein said first fine adjustment mechanism includes:

a rack gear mounted to one of said ~~fine adjustment~~ first positioning block and said ~~gross~~ second positioning block; and

a thumbwheel gear configured to mesh with said rack gear and mounted to the other of said ~~fine adjustment~~ first positioning block and said ~~gross~~ second positioning block.

35 (currently amended). The system of claim 32, wherein said position adjustment assembly further includes:

a first support ~~arm supported by said fine adjustment block~~ member extending from said second positioning block;

a ~~second-gross~~ third positioning block movably mounted on said first support member ~~arm to make gross position adjustments in a second degree of freedom different from said one degree of freedom~~; and

a ~~second fine adjustment~~ fourth block movably supported on said ~~second gross~~ third positioning block ~~and operable to make fine position adjustments in said second degree of freedom~~,

~~wherein said guide is supported by said second fine adjustment block.~~

36 (currently amended). The system of claim 35, wherein said position adjustment assembly includes a second support ~~arm~~ member connected to said ~~second fine adjustment~~ fourth positioning block, and wherein said guide is connected to said second support ~~arm~~ member.

37 (new). A guide assembly for a bone engaging element, comprising:  
a guide configured to guide movement of the bone engaging element, said guide having a bore through which said bone engaging element may be advanced, and said bore defining a first longitudinal axis; and  
a support apparatus configured to support said guide, said support apparatus including;

a body mountable to a bone;

a first support member extending from said body; and

a position adjustment assembly supported on said first support member, said position adjustment assembly including (i) a first gross adjustment mechanism configured to permit gross adjustment of said guide in relation to said body along a second longitudinal axis, (ii) a first fine adjustment mechanism configured to permit fine adjustment of said guide in relation to said body along said second longitudinal axis, (iii) a second gross adjustment mechanism configured to permit gross adjustment of said guide in relation to said body along a third longitudinal axis, (iv) a second fine adjustment mechanism configured to permit fine adjustment of said guide in relation to said body along said third

longitudinal axis, and (v) a third adjustment mechanism configured to permit adjustment of said guide in relation to said body along said first longitudinal axis,

wherein said first longitudinal axis is not coincident with said second longitudinal axis,

wherein said first longitudinal axis is not coincident with said third longitudinal axis, and

wherein said second longitudinal axis is not coincident with said third longitudinal axis.

38 (new). The system of claim 37, wherein said position adjustment assembly includes:

a first positioning block movably mounted on said first support member;  
and  
a second positioning block movably supported on said first positioning block.

**39 (new).** The system of claim 38, wherein said position adjustment assembly further includes:

- a second support member extending from said second positioning block;
- a third positioning block movably mounted on said second support member; and
- a fourth block movably supported on said third positioning block.

**40 (new).** The system of claim 39, wherein:  
said position adjustment assembly further includes a third support member connected to said fourth positioning block, and  
said guide is connected to said third support member.

**41 (new).** The system of claim 37, wherein said first fine adjustment mechanism includes:

- a first rack gear mounted to one of said first positioning block and said second positioning block; and
- a first thumbwheel gear configured to mesh with said first rack gear and mounted to the other of said first positioning block and said second positioning block.

42 (new). The system of claim 41, wherein said second fine adjustment mechanism includes:

a second rack gear mounted to one of said third positioning block and said fourth positioning block; and

a second thumbwheel gear configured to mesh with said second rack gear and mounted to the other of said third positioning block and said fourth positioning block.

43 (new). The system of claim 39, wherein:

one of said first positioning block and said second positioning block includes a first dovetailed recess, and

the other of said first positioning block and said second positioning block includes a first dovetailed member positioned within said first dovetailed recess.

44 (new). The system of claim 43, wherein:

one of said third positioning block and said fourth positioning block includes a second dovetailed recess, and

the other of said third positioning block and said fourth positioning block includes a second dovetailed member positioned within said second dovetailed recess.



45 (new). A guide assembly for a bone engaging element, comprising:  
a guide configured to guide movement of the bone engaging element  
along a first longitudinal axis; and

a support apparatus configured to support said guide, said support  
apparatus including;

a body mountable to a bone;

a first support member extending from said body; and

a position adjustment assembly supported on said first support  
member, said position adjustment assembly including (i) a first gross  
adjustment mechanism configured to permit gross adjustment of said  
guide in relation to said body along a second longitudinal axis, (ii) a first  
fine adjustment mechanism configured to permit fine adjustment of said  
guide in relation to said body along said second longitudinal axis, (iii) a  
second gross adjustment mechanism configured to permit gross  
adjustment of said guide in relation to said body along a third longitudinal  
axis, (iv) a second fine adjustment mechanism configured to permit fine  
adjustment of said guide in relation to said body along said third  
longitudinal axis, and (v) a third adjustment mechanism configured to  
permit adjustment of said guide in relation to said body along said first  
longitudinal axis,

wherein said first longitudinal axis is not coincident with said  
second longitudinal axis,

wherein said first longitudinal axis is not coincident with said third longitudinal axis, and

wherein said second longitudinal axis is not coincident with said third longitudinal axis.

46 (new). The system of claim 45, wherein said position adjustment assembly includes:

a first positioning block movably mounted on said first support member;  
a second positioning block movably supported on said first positioning block;

a second support member extending from said second positioning block;  
a third positioning block movably mounted on said second support member; and

a fourth block movably supported on said third positioning block.

47 (new). The system of claim 46, wherein:  
said position adjustment assembly further includes a third support member connected to said fourth positioning block, and  
said guide is connected to said third support member.

48 (currently amended). The system of claim 47, wherein:

said first fine adjustment mechanism includes (i) a first rack gear mounted to one of said first positioning block and said second positioning block, and (ii) a first thumbwheel gear configured to mesh with said first rack gear and mounted to the other of said first positioning block and said second positioning block, and

said second fine adjustment mechanism includes (i) a second rack gear mounted to one of said third positioning block and said fourth positioning block, and (ii) a second thumbwheel gear configured to mesh with said second rack gear and mounted to the other of said third positioning block and said fourth positioning block.

49 (new). The system of claim 48, wherein:

one of said first positioning block and said second positioning block includes a first dovetailed recess,

the other of said first positioning block and said second positioning block includes a first dovetailed member positioned within said first dovetailed recess,

one of said third positioning block and said fourth positioning block includes a second dovetailed recess, and

the other of said third positioning block and said fourth positioning block includes a second dovetailed member positioned within said second dovetailed recess.